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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,360	03/28/2001	Stephen Herman	US 010123	2079

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EXAMINER

YENKE, BRIAN P

ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 11/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/819,360	HERMAN ET AL.
	Examiner	Art Unit
	BRIAN P. YENKE	2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some *
 - c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2&4.
- 4) Interview Summary (PTO-413) Paper No(s). _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 15-21 rejected under 35 U.S.C. 102(b) as being anticipated by Kosravi et al., EP-844582.

In considering claims 1, 15 and 19,

- a) *the claimed an input buffer* is met by frame grabber 120 of video processor 140 (Fig 1)
- b) *the claimed a segmentation controller* is met by PC 130 of video processor 140 (Fig 1) which segments the video frame into to identify a region of pixels in the foreground of the image (Fig 2)
- c) *the claimed an image processor* is met by PC 130 of video processor 140 (Fig 1) which computes the probability (403) of the model of one or more individual faces of an image being based on the ellipse(s) fitted in the identified region of the image
- d) *the claimed an enhancement controller* is met by PC 130 of video processor 140 (Fig 1) which iteratively adjusts the model via means (404,405 Fig 4) to maximize the probability computation, thus ensuring the face is included in the identified region.

In considering claims 2, 16 and 20,

The claimed wherein said segmentation controller segments said first stored frame into said plurality of segments as a function of said probability function is met where the image is segmented according the function of the probability of the face being included in the shape of an elliptical shape.

In considering claims 3, 17 and 21,

The claimed wherein said enhancement controller increases an amount of enhancement of said parameter as a value of said probability function increases is met where PC 130 which selects the model of one or more individual faces by selecting the region with the maximum probability.

In considering claims 4 and 18,

The claimed wherein said enhancement controller decreases an amount of enhancement of said parameter as a value of said probability function decreases is met where PC 130 which selects the model of one or more individual faces by selecting the region with the maximum probability, thus not selecting models which are lower in probability.

In considering claim 5,

The claimed further comprising a memory capable of storing... is met by memory 135 and PC 130 which perform/store the segmentation of the received image into recognized face/eye patterns.

In considering claim 6,

The claimed wherein said memory is further capable of storing an enhancement algorithm... is met by memory 135 and PC 130 which selects/selects the model of one

or more individual faces by the selecting the region(s) with the maximum probability of being face.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2a. Claims 7 and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Kosravi et al., EP-844582 in view of Gossett et al., US 2003/0002732.

In considering claims 7 and 14,

Kosravie discloses that the probability of the selected region (i.e. face/eyes) are based upon the pixel intensities at the particular location (page 4, line 29-43).

However, Kosravie does not specifically disclose the pixel intensity being calculated from the YUV color values.

Kosravie does disclose that the received image may contain three color planes, commonly referred to as YUV or YIQ.

Although, the pixel color values of a color space, such as YUV color space are conventional in the art, nonetheless the examiner incorporates Gossett.

Gossett discloses that pixel value can be selected from any number of pixel color spaces, where one common space format is the known YUV color space, where the Y

component refers to the luminance component and the U and V component refers to the chrominance components.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kosravi which discloses calculating the probability of a selected region based upon the pixel intensity, with Gossett, by calculating the pixel value/intensity of the pixel based upon the color space used (i.e. YUV), in order to correctly calculate the probability of a pixel belonging to a particular region based upon the color space used and the value of the pixel within that color space.

2b. Claims 8-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Kosravi et al., EP-844582.

In considering claim 8,

- b) the claimed an input buffer* is met by frame grabber 120 of video processor 140 (Fig 1)
- c) the claimed a segmentation controller* is met by PC 130 of video processor 140 (Fig 1) which segments the video frame into to identify a region of pixels in the foreground of the image (Fig 2)
- d) the claimed an image processor* is met by PC 130 of video processor 140 (Fig 1) which computes the probability (403) of the model of one or more individual faces of an image being based on the ellipse(s) fitted in the identified region of the image

e) *the claimed an enhancement controller* is met by PC 130 of video processor 140 (Fig 1) which iteratively adjusts the model via means (404,405 Fig 4) to maximize the probability computation, thus ensuring the face is included in the identified region.

However, Kosravie does not specifically disclose demodulation circuitry.

Kosravie discloses a system which receives an analog video signal 115 and converts this signal into a digital image stored within image memory 135 which is processed by video processor 140. Kosravie also discloses that the frame grabber may convert the video signal into NTSC or PAL, and also the image may consists of three color planes commonly referred to as YUV or YIQ.

Thus, Kosravie discloses receiving the analog captured image from camera 110, which can then be converted into an appropriate format (i.e. NTSC or PAL) for processing.

It is also known that in order to received a modulated signal, the receiver would require a demodulator in order to obtain the baseband video signal.

Thus the examiner takes "OFFICIAL NOTICE" in regards to a system which includes a demodulator to receive an incoming RF TV signal which then generates a baseband video signal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kosravie which discloses receiving an image signal from camera 110, which can be converted into an appropriate format (i.e. NTSC or PAL) by including a tuner/demodulator in the system, in order to receive RF TV signals which are broadcast, which would provide Kosravie the ability to receive analog signals

captured from both camera 110 and the tuner, thus providing Kosravie the ability to capture images (video signals) from remote cameras.

In considering claim 9,

The claimed wherein said segmentation controller segments said first stored frame into said plurality of segments as a function of said probability function is met where the image is segmented according the function of the probability of the face being included in the shape of an elliptical shape.

In considering claim 10,

The claimed wherein said enhancement controller increases an amount of enhancement of said parameter as a value of said probability function increases is met where PC 130 which selects the model of one or more individual faces by selecting the region with the maximum probability.

In considering claim 11,

The claimed wherein said enhancement controller decreases an amount of enhancement of said parameter as a value of said probability function decreases is met where PC 130 which selects the model of one or more individual faces by selecting the region with the maximum probability, thus not selecting models which are lower in probability.

In considering claim 12,

The claimed further comprising a memory capable of storing...is met by memory 135 and PC 130 which perform/store the segmentation of the received image into recognized face/eye patterns.

In considering claim 13,

The claimed wherein said memory is further capable of storing an enhancement algorithm...is met by memory 135 and PC 130 which enhances/selects the model of one or more individual faces by the selecting the region(s) with the maximum probability of being face.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (703) 305-9871. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John W. Miller, can be reached at (703)305-4795.

Any response to this action should be mailed to:

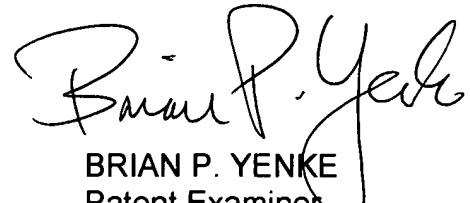
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or

relating to the status of this application or proceeding should be directed to the
Technology Center 2600 Customer Service Office whose telephone number is
(703)305-HELP.



BRIAN P. YENKE
Patent Examiner
Art Unit 2614

BY
B.P.Y

November 12, 2003